Report for 2001MN3361B: Basic Water Resources Center Grant

There are no reported publications resulting from this project.

Report Follows:

Water Resources Center
Annual Technical Report
FY 2001

The Minnesota WRRI program is administered by the University of Minnesota Water Resources Center (WRC), which is a collaborative enterprise involving several college_level units: the College of Natural Resources (CNR), College of Agricultural, Food & Environmental Sciences (COAFES), and the Minnesota Extension Service (MES), plus the University of Minnesota Graduate School, which provides funds to administer the Water Resources Science graduate program, which is housed administratively in the WRC. The WRC has co_directors, who divide the overall responsibilities for Center operations between them. Patrick Brezonik reports to the dean of CNR and is responsible for administering the WRRI program. He also is Director of Graduate Studies for the WRS Program. James L. Anderson reports to the deans of COAFES and MES and is responsible for extension operations. The co_directors share responsibilities for other outreach and research activities of the Center.

The WRC has an administrative staff consisting of an associate administrator, accountant, senior secretary/editor, grant coordinator, and two part_time graduate students who are responsible for newsletter and report editing and Web site maintenance. The Center also has two Ph.D._level senior fellows (one in resource economics and one in water quality/environmental engineering), an education coordinator, three extension program coordinators, and six extension educators located in off_campus offices.

The WRC has an administrative oversight council that includes the deans of the three colleges to which it reports, an associate vice_president of research and associate dean of the Graduate School, and the heads or directors of key departments/programs on the Twin Cities and Duluth campuses of the University. The Center's external advisory committee consists of senior faculty, directors of other University water_related centers, and representatives of major state and federal water agencies.

The Center ran its WRRI grant proposal competition for FY 2001 in a manner similar to previous years. An announcement of the competition and guidelines for proposal preparation were distributed to faculty on the various university campuses in early October, and a deadline for proposal submission was set for early November. Proposals received by the deadline were sent to peer reviewers, and care was taken to select reviewers who did not have an obvious conflict of interest. At least one reviewer was a faculty member from the University of Minnesota (usually from a department different than that of the PI submitting the proposal); one was from a federal, state or regional agency located in Minnesota; and one was from a university or federal laboratory outside Minnesota. Three or more reviews (usually four) were received for all proposals. A separate proposal selection committee then met in early January 2001 to review all proposals and their associated peer reviews. The panel ranked the proposals based on merit and fit to the Center's research program, but it also considered long_standing principles of the Center to support young faculty and to leverage its funds whenever possible. Three new projects were selected for funding in the FY 2001 program:

(1) “Paleohydrologic response of the Mississippi River Headwaters watershed to Holocene climate change,” Howard Mooers, Department of Geology, University of Minnesota-Duluth;

(2) “Eutrophication and remediation in context: high-resolution study of the past 200

years in the sedimentary record of Lake McCarrons (Roseville, Minnesota)," Amy Myrbo and Emi Ito, Department of Geology and Geophysics, University of Minnesota, Minneapolis; and

(3) "Fluorochemicals in Minnesota waters: an emerging environmental issue," Matt Simcik, Environmental and Occupational Health, School of Public Health, University of Minnesota, Minneapolis.

One additional project in our FY 2001 program ("A novel in-situ technology for the treatment of groundwater contaminated with agriculturally-derived nitrate," Paige Novak and Michael Semmens, Department of Civil Engineering, University of Minnesota, Minneapolis) was a continuation from FY 2000. Partial funding for the Center's FY 2001 grant program was provided by the University of Minnesota's Agricultural Experiment Station through a grant to the Center for Agricultural Impacts on Water Quality, a component of the WRC.

Three projects from the WRRI 104G program were active at the University of Minnesota during FY 2001:

" Role of denitrification as a nitrate sink in agricultural streams," Lorin Hatch and Patrick Brezonik, Water Resources Center, funded in FY 2000;

"Photochemical fate of pharmaceutical compounds discharged and detected in natural waters," William Arnold (Department of Civil Engineering) and Kris McNeill (Department of Chemistry), University of Minnesota, Minneapolis, funded in FY 2001; and

"Antibiotic losses in runoff and drainage from manure-applied fields," Satish Gupta (Department of Soil, Water, and Climate) and Ashok Singh (Veterinary Diagnostic Laboratory), University of Minnesota, St. Paul, funded in FY 2001.

The Center published two completion reports from research projects conducted by WRC staff in FY 2001:

Integrating Modeling and Management of Agriculturally-Impacted Watersheds: Issues of Spatial and Temporal Scale, P.L. Brezonik, W.K. Easter, L. Gerlach, L. Hatch, D. Mulla, and J.A. Perry, Tech. Report 141, December 2001.

Methods for Classifying Lakes Based on Measures of Development Impacts, R.A. Osgood, P.L. Brezonik, and L. Hatch, Tech. Report 143, January 2002

In addition, Center published the first in an expected continuing series of annual reports summarizing its research program:

Advances in Water Resources Research: Project Summaries for 2001 Tech. Report 142, January 2002.

The WRC continued to publish its quarterly newsletter, Minnegram, during FY 2001 and did the planning and organization for its biennial water conference, *Minnesota Water 2002*, which was held at the convention center in St. Cloud, Minnesota, in April 2002. A major

overhaul and updating of the WRC and WRS Web sites was initiated in FY 2001, and the revised sites went on_line in early spring of 2002.